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STERLING SEED CORN BULLETIN



STERLING SEED CORN BULLETIN

Published in the Interest
of Better Corn Crops
for the Northwest

By

NORTHROP, KING & CO.
Minneapolis, Minn.



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Northrup, King & Co.

Historical

CONTRARY to general belief, Northern Wisconsin, Minnesota and North Dakota were in the corn belt over a hundred years ago. Corn was grown extensively by the Indians years before this territory was settled by the white man.

Mr. Lyman Ayer, of Little Falls, whose parents were missionaries among the Chippewas in 1854, states that the Red Lake Chippewas living in the vicinity of the lake by that name in northwestern Minnesota, cultivated corn extensively, growing a dwarf type with mixed colored ears, called Squaw Corn.

Historical records of the early Wisconsin Indians show that corn was grown by them everywhere from the Southern State Line to the Lake Superior Shore. Several tribes living in the territory now covered by North Dakota and Montana were extensive corn growers at the time the first white men visited them. M. de la Verendrye, a French explorer, visited the Mandan tribe in 1838 and describes, in his journal, their corn and storage pits. The Mandans lived along the Missouri River in North Dakota, near the present town of that name. When Lewis and Clark made their expedition to the Pacific Coast it is said they would probably have been forced to return from the Missouri River unless they obtained food. They purchased 90 bushels of Corn from the Mandans in one lot, besides other purchases, enabling them to continue the expedition.

Maximilian, a German explorer, estimated that during the winter of 1833 Fort Clark had from 500 to 800 bushels of corn, stored in lofts, which had been purchased from the Indians.

Corn was so plentiful near Fort Union, which was located near the mouth of the Yellowstone River in Montana, that a distillery was established there in 1833. These northern tribes grew a very early dwarf type of corn now known as Squaw Corn.

Settlers coming into Minnesota in early days from the east brought their seed corn with them mostly from the south, consisting mainly of late dent varieties not adapted to northern sections. It is no wonder that production of corn was considered impossible in early pioneer days with these unadapted varieties.

When Northrup, Braslan, Goodwin Company, the predecessors of Northrup, King & Co., started business in Minneapolis in 1884, two of the partners were from New England. Conditions were so similar here to those in their home state that the New England Flints were catalogued and recommended by them. These varieties—King Phillip, Longfellow and Mercer, proved adaptable and helped move the corn belt farther north on account of the wide distribution this company gave them.

In the early days of their business, Mr. Northrup discovered a white dent considerably earlier than other dents common in Minnesota at that time. After a few years of breeding he introduced Rustler White Dent in 1888. Rustler has not been dropped as were most of the other varieties which were common 40 years ago, being still the most popular white dent corn.

Sibley's Pride of the North was catalogued by Northrup, Braslan, Goodwin Company in 1884 and probably was the most popular early yellow dent until crowded out by Minnesota No. 13 in 1897. Pride of the North is considered a parent of Minnesota No. 13, but had rougher kernels and was later in maturity than No. 13.

In 1887 Squaw Corn appeared in their catalogue but a preference was shown for the dents and larger flints.

In 1890 Minnesota King, a cross between a flint and a dent, was introduced and was very popular through northern Minnesota, North Dakota and Montana for nearly 10 years, when it was replaced in popularity by Northwestern Dent. Since about 1900, Northwestern Dent, also a flint-dent cross, has been the most popular variety, taking the Northwest as a whole.

Montana, North Dakota and Wisconsin have accepted the many standard Minnesota varieties. Even the Washington Experimental Station recommends Minnesota No. 13, grown north of Minneapolis, for use in western Washington. Minnesota No. 13 is one of the parents of Golden Glow or Wisconsin No. 12, the most popular Wisconsin variety, and Wisconsin No. 8 is also a direct selection from Minnesota No. 13.

The influence of Northrup, King & Co. in promoting profitable corn growing in the Northwest is recognized by authorities. Montana Bulletin No. 107 on corn credits either Northrup, Braslan, Goodwin Co., or Northrup, King & Co., with the introduction of nearly half of the standard corn varieties of the Northwest.

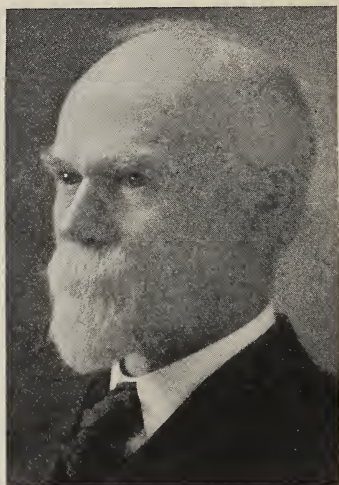
The large distribution of Northrup, King & Co.'s seed corn over the entire Northwest for the last 40 years, has placed these standard adaptable varieties in nearly every community of this northwest country from Lake Michigan to the Pacific Coast. The country as a whole has benefitted.



Breeding Sterling Seed Corn

NORTHROP, King & Co.'s Corn Breeding and trial grounds cover several acres. Breeding and Production of Sterling Seed Corn is under the personal direction of our two corn specialists whose entire time for years has been devoted to this work. The general plan of our breeding begins with selecting the most desirable plants from a special corn field planted with the best available seed. This selection is made just after tassels appear and paper bags are placed over the tassels and ear shoots of the selected plants before the silk appears. When the pollen on the tassel is ripe, the bags are carefully removed and pollen is transferred from the tassel to the silk of the same plant, the bag being replaced over the silk to keep out any other pollen. This is called self fertilization. The lower picture shows C. A. Bush, hand pollenating a corn plant.

Normally, pollen blows from the tassel of one corn plant to the silk of another, causing cross fertilization. The object of self fertilizing is to exclude pollen from other plants, confining the inheritance of the selected plant to that particular individual. These selected, self-fertilized ears are harvested when ripe and each is given a number.



A. K. BUSH

Our Corn Specialist Since 1904 and a
Practical Farmer of Over 50
Years' Experience



C. A. BUSH, in Charge of Breeding and Production
of Sterling Seed Corn Since 1918

The next year a separate row is planted from each ear. Each row is a family of plants all from one mother ear. The plants in each of these ear rows are studied and notes taken during the growing season as to their vigor, color, height of growth, lodging, etc. At harvest time the row is harvested and the yield of each row weighed. Before harvest, however, five of the best plants in each row are capped with bags and self fertilized as was done the year before. The ears from these plants are planted in ear rows again the next year. This process is continued for several years until the yielding ability and other characteristics of each of these families is well known and recorded.

Investigators have found that normal corn is composed of a certain number of fundamental strains. Natural cross fertilization which takes place in an ordinary corn field results in a very complex combination of these different strains in the inheritance of each individual plant. The inbreeding process just described tends to isolate these fundamental strains.

When we have isolated fundamental strains, or pure lines as they are called, we have what farmers have always sought, namely uniformity. When a row is planted from an ear which is reduced to a pure line every plant in that row will grow exactly alike, and every ear will have the same charac-



Northrup, King & Co.'s Breeding Grounds at Seeding Time

teristics. The various rows planted with other ears will differ from each other in some characteristic. Some of these pure lines are so weak they will not reproduce themselves and are dropped by natural elimination. Other lines show a high percentage of smutted plants, still others an inherited weakness of stalk. Some show consistently large ears and will yield several times as much as weak rows which produce only nubbins.

It is common knowledge that a prize ear of normal corn will not reproduce itself consistently but a pure line like those secured from the kind of breeding described above will reproduce the same type of ear and plant each year.



Northrup, King & Co.'s Breeding Grounds at Pollenizing Time

The objection will arise in the minds of many that inbreeding in plants and animals is harmful. It is temporarily harmful but brings to light hidden weaknesses in strains which otherwise appear strong. Even the strongest strains are reduced in size and yield to a certain degree but the weak strains are reduced much more. After we learn which strains are strong and desirable these may be crossed with other strong strains and the original vigor of normal corn again recovered with an additional vigor called first generation hybrid vigor.

A hidden weakness in a strain, apparently healthy, which self fertilization brought to light, is illustrated in the picture of Row No. 148. This row was planted from a self fertilized ear taken from a plant selected, in the field, on account of its vigorous appearance. Over 50% of the plants grown from that ear came up white. These white seedlings as they are called, die within a few days.



White Seedlings in Row No. 148

On the other hand, regardless of the harmful effects of inbreeding, some strains continue to grow vigorously with uniformly strong healthy plants like Row No. 17. They consistently produce large ears and in the case of this row the maturity was surprisingly early. Certain strains are consistently late maturing while others are uniformly very early. This Row No. 17 checked out earlier in maturity than five extra early yellow dent varieties compared with it. Some strains show an inherited character of broad leaves, others show a tendency consistently to set three or more ears on a stalk.



A Good Row, No. 17

Other strains under the harmful effects of inbreeding reveal a weakness of stalk. In some lines the stalks will break off at the joints consistently throughout the row. In some cases the plants will all lodge. Row 207, shown on page 7, lodged almost completely, while row 206 on its left, stood erect under the same conditions.



Lodged Row on the Right—Straight Row on the Left

Good and bad characteristics of many kinds are revealed which have a bearing on yield in a normal corn field. After the characteristics of each pure line are known and yields have been checked for years, the good pure lines can be crossed into combinations which will give the highest yields. Many combinations must first be tried and the yields tested in plots before the best combination can be found.

Nearly every experiment station has adopted the inbreeding method for seed corn improvement. Wallace's Farmer says of it, in the issue of Dec. 21, 1923: "The chances are ten to one that this new method of corn breeding on which so many experiment stations are now working will completely change our seed corn methods."

It will be several years before the complete benefits of this work will be available to northwestern planters. In the meantime we continue to grow, cure and distribute the best seed corn that skill, honest effort and large facilities can produce.



Plot for Testing Flint and Dent Varieties

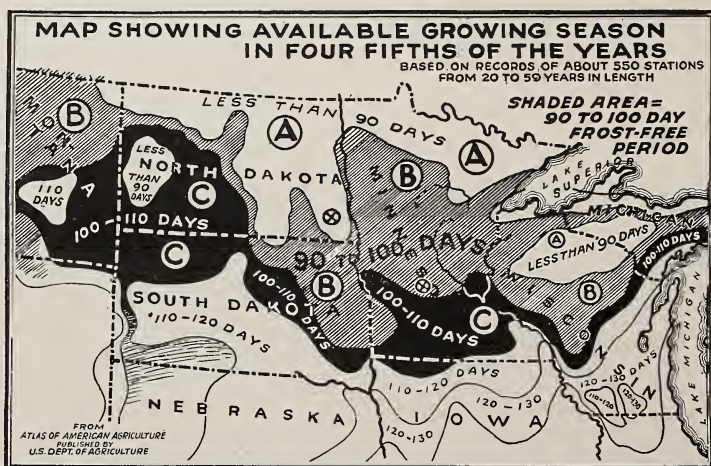
Production of Sterling Seed Corn

STERLING Seed Corn is produced from Northrup, King & Co.'s own special seed stocks. Growing of the crops from these special seed stocks is entrusted to selected farmers, most of whom have been growing seed corn for us for many years.

Production is concentrated around certain growing stations, where experience has shown a high quality crop can be grown each year, regardless of drought, wet seasons or frost. One of these growing stations is located about 75 miles south of Minneapolis, in the 100 to 110 day zone, (see map below) where the later varieties requiring 100 to 110 days to mature are grown. Two stations are located about the same distance northwest of Minneapolis, in the 90 to 100 day zone, where varieties requiring 90 to 100 days to mature are grown. At two other stations north of Minneapolis, the extra early dent varieties, and many of the flint varieties are grown.

These stations are all so near to Minneapolis that careful personal supervision of the production can be made. Quick delivery can also be made to our drying house in Minneapolis, and better supervision of the harvesting and storing before shipment is possible.

Fields are grouped according to varieties and carefully isolated from other corn.



Growers harvest the seed ears during September or early October and store them until shipping time, in special wire seed corn cribs. These cribs are very narrow with wire sides and arranged so the air can circulate through the center, providing the maximum of drying afforded by outside conditions.



Field Drying Crib for Storage Before Shipping

Delivery is made to us at the growing stations during October, where loading into cars is done by our men with special equipment for rapidly handling seed corn ears.

The growers deliver only the choice ears from the crop which must be of a high quality. Corn not meeting this standard is rejected. Many of our growers have been producing seed corn for us from 10 to 20 years and are specialists in this line.



Loading Cars at One of Our Growing Stations

The fact that Sterling Seed Corn is grown from Northrup, King & Co.'s own seed stocks is more significant to planter than it may seem on first thought.

It means that each individual variety of Sterling Seed Corn is uniform in maturity and type, year after year.

It means that once a Sterling variety has been proven adapted to conditions in any particular locality the purchaser can depend upon every bushel of that variety he buys later being just the same.

So important do we consider this uniformity of Sterling Seed Corn that enough growers' seed stock is carried over each year so that in case of a total failure of a corn crop we still would be able to plant our usual acreage with this reserve seed stock the next year. During the great seed corn shortage in the spring of 1918 we were offered \$15.00 per bushel for this reserve special seed stock.

Compare this careful system of producing Sterling Seed Corn with the practice of going out into the country and buying seed corn where it can be bought the cheapest without information concerning its earliness or purity. The only fact known about such corn is the state in which it is grown. North Dakota Grown, Minnesota Grown or Wisconsin Grown is not a safe guide to judge maturity of seed corn. One section in Minnesota has a growing season so short that the earliest squaw flint cannot be matured. Another part has the same growing season as central Iowa. On this basis it can be seen that Minnesota grown means nothing in respect to maturity.

We believe it is possible for a seedsman to know that the corn he sells you is of proper maturity only when his seed is grown from his own seed stocks, under his own supervision. Northrup, King & Co. stands almost alone in its careful policy of growing all Sterling Seed Corn from its own seed stocks.



A Car of Sterling Seed Corn

Curing and Drying Sterling Seed Corn

STERLING Seed Corn is fire dried during October and November to approximately 12% moisture. By fire drying is meant driving off the excess moisture within a comparatively short time by the use of warm air.

Nearly all Seed Corn troubles are due to too much moisture. If Seed Corn is dried to 12% before cold weather most of these troubles disappear. If Corn containing 20% moisture is exposed to temperatures between 15 and 20 degrees the germs are killed. Corn containing 16 to 18% moisture will often mold and heat in the spring when the weather gets warm. Either mold or heat kills corn germs. Besides these common seed corn troubles seed corn germs lose their vigor if excess moisture is allowed to remain in the corn during the winter. Seed with germs weakened this way will show sprouts in an artificial germination test but do not have sufficient vigor to make a plant in the field when conditions are unfavorable.

The reason for this loss of vigor is that seeds carry on a sort of breathing called respiration. This respiration is rapid with much moisture present and requires energy which is taken from the germ, thereby weakening it. If thoroughly dry, respiration is held to the lowest possible point and the vigor of the germ is conserved. This principle is important in corn yields because plants weak at the start usually remain weak and produce nubbins.

During our forty years experience in handling Seed Corn we have tried nearly every conceivable curing method. All of them except our present method failed to dry thoroughly or rapidly enough.



FRED WILLIAMS

For Fifteen Years in Charge of Our Corn House

Northrup, King & Co's corn curing system is radically different from any other system in use in the Northwest. As soon as the cars of ear corn reach our Minneapolis plant they are unloaded directly into a hopper on the basement floor of our corn warehouse. An elevator carries the ears from the hopper to either the first or second floor of the corn house and delivers them into drying racks.



Filling the Drying Racks With Corn From the Cars

The racks are made with slat bottoms and with openings at each end to permit free circulation of air. When filled with ears of seed corn the racks are piled, fifteen high, on a skid. Then with a lift truck these piles are hauled to and from the drying rooms without further repiling and loss of time.



Corn in Drying Racks Ready for the Dry Room

At each end of our seed corn warehouse is a dry room unit consisting of two floors and basement. The first and second floors are made grate style, with one inch opening between each inch board placed edgewise. The first and second floor drying rooms are filled with piles (15 high) of drying racks containing seed corn ears. Sufficient space is allowed between piles to provide complete air circulation.



Second Floor of the Dry Room Filled With Piles of Racks

Large fans and furnaces in the basement draw in and heat 8000 cubic feet of air each minute. This air then passes up through the perforated floor and open bottom drying racks absorbing the moisture from the ears of corn and passing off through ventilators in the roof. Within 3 days the moisture of the 3000 bushels of corn in each room is reduced from 20% to 12%, a maximum temperature of 80° being used.



Filling First Floor of the Dry Room With Corn in Drying Racks

After drying, the corn is again hand sorted just before shelling. Each ear is carefully examined as it passes the sorters, on a slow moving belt. Any which do not come up to the Sterling Standard are removed.



Sorting Tables Where Sterling Seed Corn is Hand Sorted

The sorting table discharges directly into the sheller which has a capacity of 2000 bushels per day. The shelled corn is carried on an endless belt to the main building and elevated to the cleaners and graders. Here tip and butt kernels are removed and the seed graded to uniform sized kernels. It is then sacked in seamless white cotton bags bearing the Sterling Seed Corn trade mark and is ready for shipment.

We aim to have all Sterling Seed Corn cured, dried, shelled, sacked and stored away by Thanksgiving time. Early, thorough drying like this is recommended by all Experiment Stations. It is the only method by which dependable germination can be assured year after year.



A Section of the Mill Floor Showing a Battery of Cleaners

Northrup, King & Co.'s Corn Curing House is the second from the left in the group of four buildings composing Northrup, King & Co.'s plant. This building is devoted entirely to curing and storing of Sterling Seed Corn. It is 300 feet long, 75 feet wide, two stories and basement, with storage capacity for 100,000 bushels of corn on the first and second floors.

With this efficient equipment and the large volume handled, Sterling Seed Corn is cured at a very low cost per bushel considering what is accomplished. It would not be possible for small quantities to be handled more economically. Cheaper seed corn is cheaper because the thorough work put on Sterling Seed Corn is lacking. If farmers wanted cheap seed corn, Northrup, King & Co., with its plant equipment and volume, could lower its prices materially by cutting out important processes. But our experience has shown us that farmers want good seed corn produced as economically as possible.

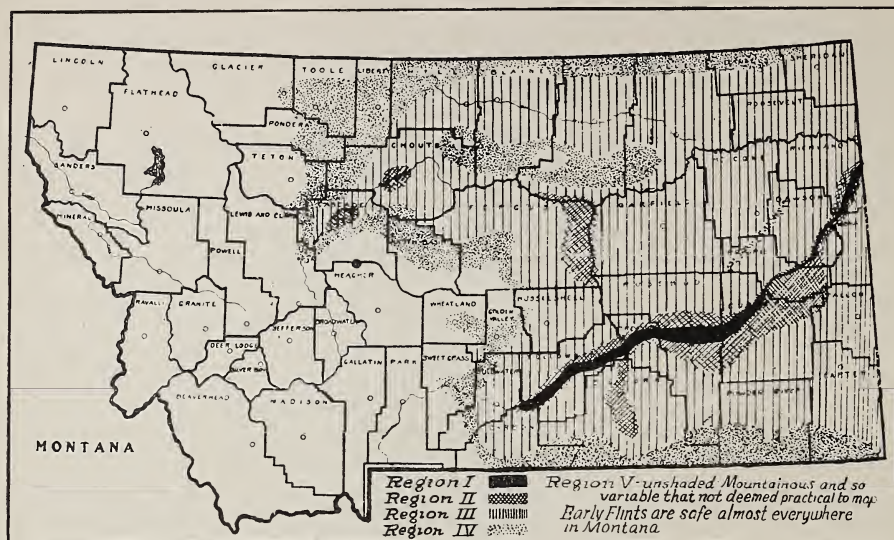
As Sterling Seed Corn is being sacked, a representative sample is taken which goes to our seed laboratory. Here the moisture content is tested again and germination test is made in electrically controlled germinators.

Each bag of Sterling Seed Corn bears a tag showing county where grown, moisture content, percentage of germination and dates when these tests were made.

Fire drying in the early fall to a low moisture content as practiced by Northrup, King & Co. is recommended by the Wisconsin, Minnesota and North Dakota Experiment Stations. As far as we know, Northrup, King & Co. is the only large seed house in the Northwest fire drying all its corn to an average of 12% during October and November. As a result of this process, Sterling Seed Corn has a higher and more vigorous germination, producing a better stand of more vigorous plants in the field, which is an important factor in high yields.



Northrup, King & Co.'s Laboratory Where All Lots of Seed Corn are Tested
by the Best Seed Analysts in the Country



Corn Adaptation Map

Prepared by Montana Experiment Station
and Extension Service

Region I.

For Silage: Standard Minnesota 13, Rustler White Dent.

For General Purpose: Mercer Flint, Triumph Flint, Extra Early Minnesota 13 (Haney Strain), Standard Northwestern Dent.

Region II.

Extra Early Minnesota 13 (Haney Strain), Extra Early Northwestern Dent (Crookston Strain), Mercer Flint.

Region III.

For Silage: Extra Early Minnesota 13, Standard Northwestern Dent, Mercer Flint.

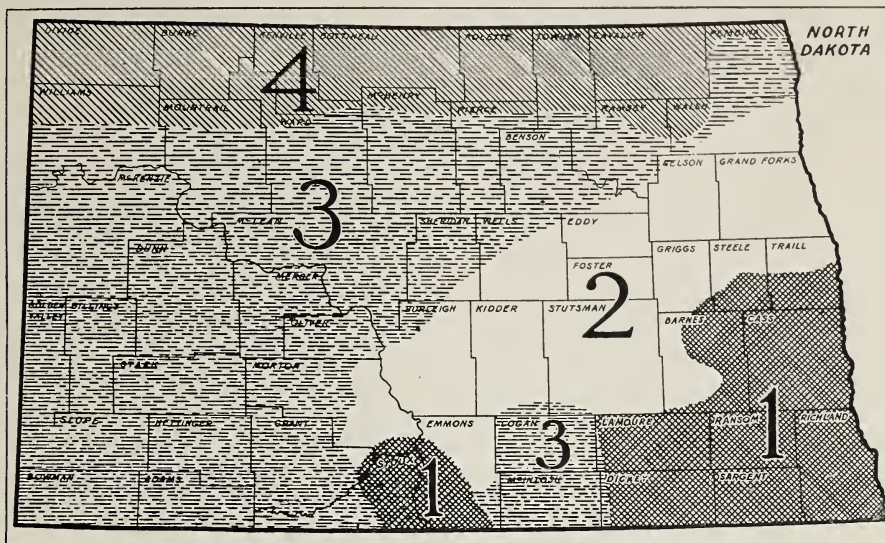
General Purpose: Extra Early Northwestern Dent, Wisconsin 25, Extra Early Minnesota 13 (for warm soils).

Region IV.

For Fodder: Extra Early Northwestern Dent, Minnesota 23.

Region V.

Extra Early Northwestern Dent (Crookston), Extra Early Minnesota 13 (Haney), Mercer Flint.



Map Prepared by North Dakota Agricultural Experiment Station.

Recommended Corn Varieties for North Dakota

Section 1

For husking, silage or bundle feeding:

- Extra Early Minnesota No. 13 (Haney Strain)
- Extra Early Northwestern Dent (Crookston Strain)
- Mercer Flint

For hogging off or grain pasture:

- Gehu Flint
- North Dakota White Flint.

Section 2

For entire section:

- Extra Early Northwestern Dent (Crookston Strain)
- Gehu Flint
- North Dakota White Flint

For Southernmost portion:

- Extra Early Minnesota No. 13 (Haney Strain)
- Mercer Flint

Section 3

- Extra Early Northwestern Dent (Crookston Strain)
- Gehu Flint

North Dakota White Flint

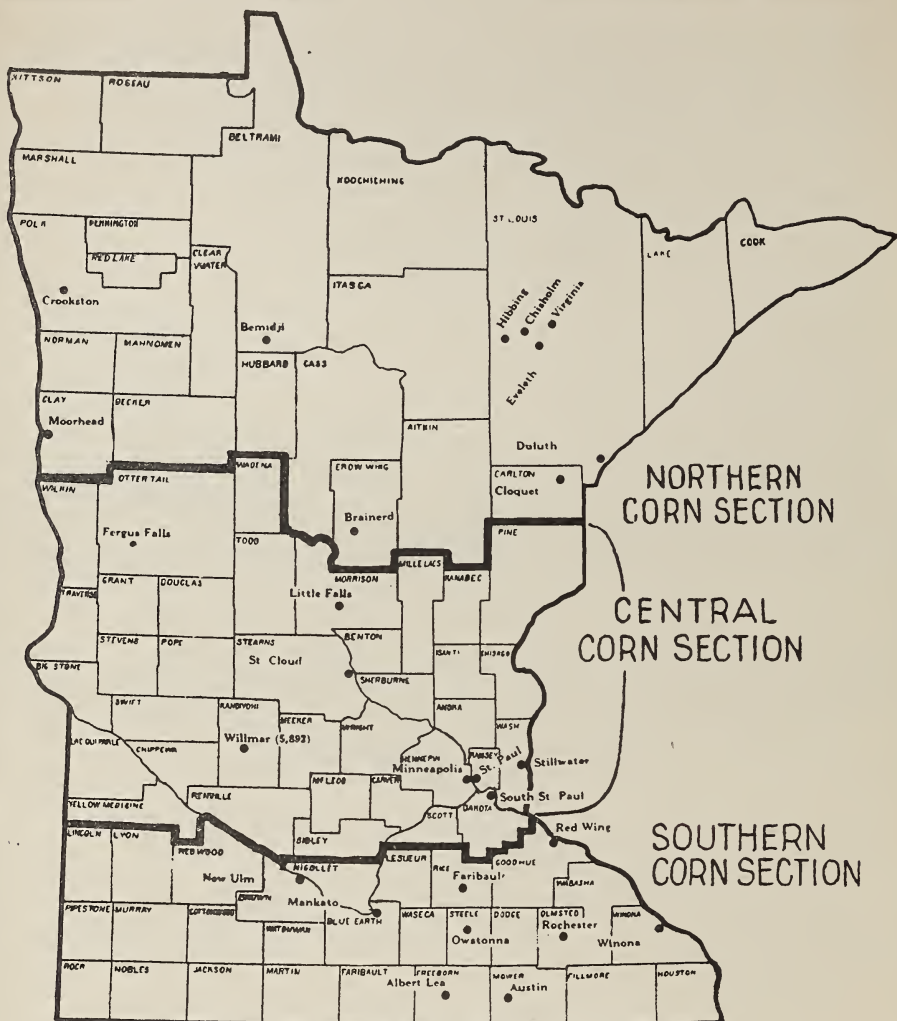
Extra Early Minnesota No. 13 (Haney Strain) for ripe Corn in favorable seasons.

Section 4

Extra Early Northwestern Dent (Crookston Strain)

Gehu Flint

North Dakota White Flint



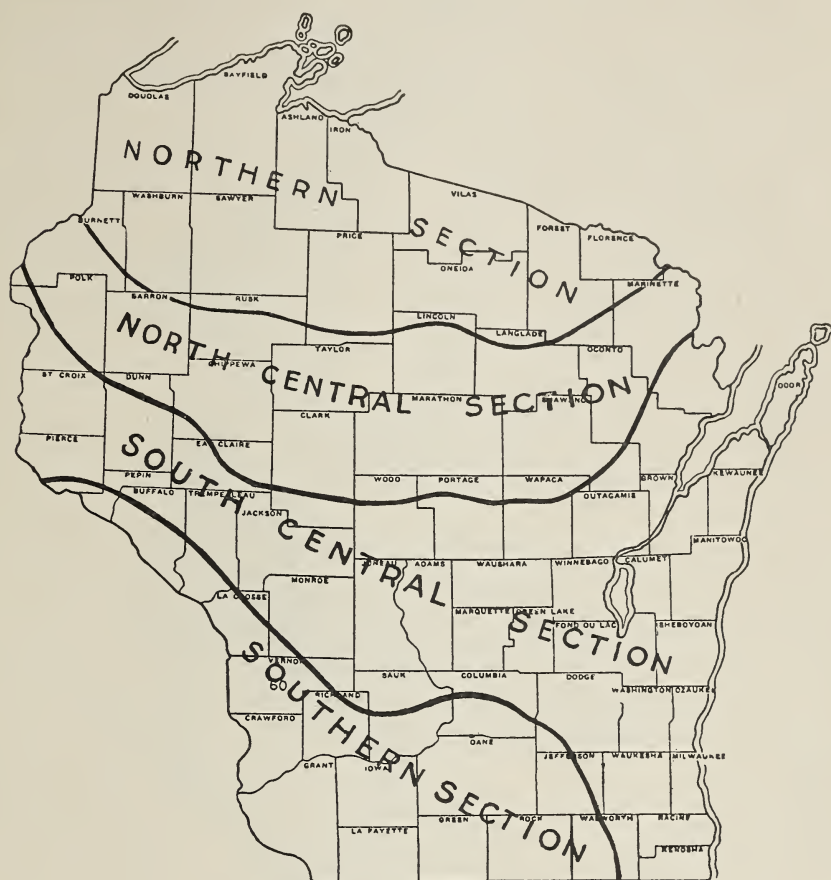
Map by Minnesota Agricultural Experiment Station.

Recommended Corn Varieties for Minnesota

Southern Section—Golden Glow, Murdock, Silver King, Minnesota No. 13, Rustler, Longfellow Flint.

Central Section—Standard Minnesota No. 13, Rustler, Standard Northwestern Dent, Extra Early Minnesota No. 13 (Haney Strain), Triumph Flint, King Phillip Flint.

Northern Section—Extra Early Minnesota No. 13 (Haney Strain), Extra Early Northwestern Dent (Crookston Strain), Minnesota No. 23, Mercer Flint, Smut Nose Flint, Gehu Flint, North Dakota White Flint.



Map by Wisconsin Agricultural Experiment Station.

Recommended Corn Varieties for Wisconsin

Northern Section—Extra Early Northwestern Dent, Wisconsin No. 25, Triumph Flint, Mercer Flint, Gehu Flint, North Dakota, White Flint.

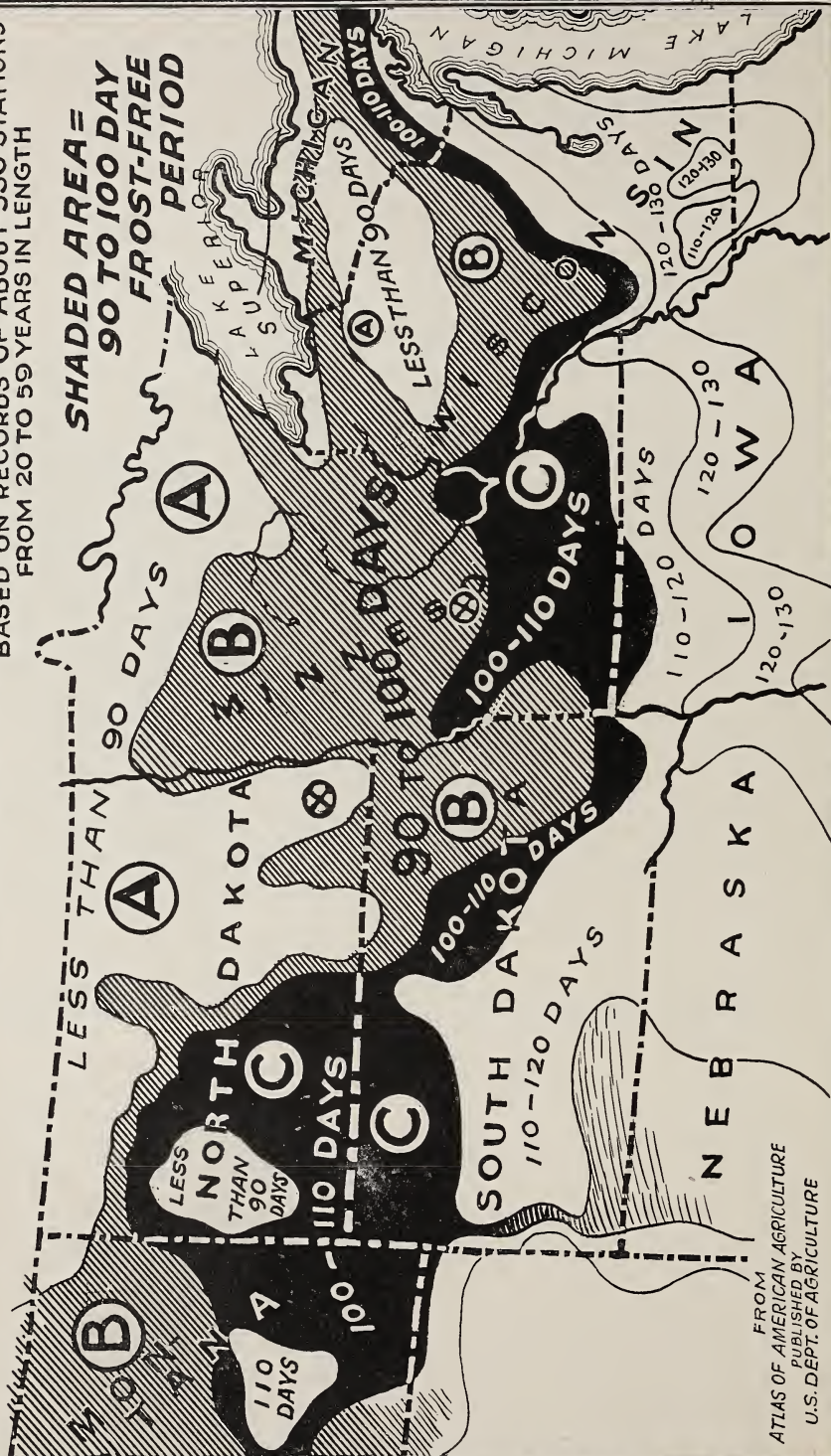
North Central Section—Early Yellow Dent Wisconsin 8, Rustler White Dent, Minnesota No. 13, Standard Northwestern Dent, Smut Nose Flint, King Phillip Flint.

South Central Section—Golden Glow Wisconsin No. 12, Minnesota No. 13, Rustler, Longfellow Flint.

Southern Section—Golden Glow Wisconsin No. 12, Murdock Wisconsin No. 13, Silver King, Wisconsin No. 7, Longfellow Flint.

MAP SHOWING AVAILABLE GROWING SEASON IN FOUR FIFTHS OF THE YEARS

BASED ON RECORDS OF ABOUT 550 STATIONS
FROM 20 TO 59 YEARS IN LENGTH



FROM
ATLAS OF AMERICAN AGRICULTURE
PUBLISHED BY
U.S. DEPT. OF AGRICULTURE

Variety	Color Grain	Av. No. Days Planting to Maturity	Average Height of Stalk	Ear Characteristics	No. Rows of Grain on Cob	Average Ear Length	Average Ear Middle Circum.	Color Cob
N. W. Dent	Red, Yellow Cap	under 90	5'-7"	Smooth, tapering	12-14	7"-9½"	5"-6"	White
Ex. Early N.W. Dent	Red, Yellow Cap	80-90	5'-6'	Smooth, cylindrical	12-14	5"-7"	4"-5"	White
Minn. #13	Yellow	90-100	6'-8'	Smooth, cylindrical	14-16	7"-9"	6"-7"	Red
Ex. Early Minn. #13	Yellow	85-95	5'-7"	Smooth, tapering	12-16	5"-7"	5"-7"	Red
Rustler	White	90-100	6'-8'	Smooth, tapering	14-16	8"-9"	5½"-6½"	White
Ideal	Yellow	100-110	7'-9'	Smooth, tapering	14-16	8"-10"	6"-7"	Red
Murdock	Yellow	100-110	7'-9'	Rough, cylindrical	16-20	6"-8"	7"-8"	Red
Minn. 23	Yellow, White Cap	under 90	5'-6'	Smooth, tapering	10-12	5"-7"	5"-6"	Red
Wis.#7 or Silver King	White	100-110	7'-9'	Rough, cylindrical	16-20	7"-9"	7"-8"	White
Wis. #8	Yellow	90-100	6'-8'	Smooth, cylindrical	14-16	7"-9"	6"-7"	Red
Wis. #12	Yellow	100-110	7'-9'	Smooth, tapering	14-16	8"-9"	6½"-7½"	Red
Wis. #25	Yellow	under 90	5'-6'	Smooth, cylindrical	14-16	5"-7"	5"-6"	Red
Triumph	Yellow	85-95	5'-7'	Smooth, tapering	12-14	8"-10"	5"-6"	White
Mercer	Yellow	85-95	5'-7'	Smooth, tapering	12-14	7"-9"	5"-6"	White
Longfellow	Yellow	90-100	6'-8'	Smooth, cylindrical	8	8"-10"	4"-5"	White
Smut Nose	Yellow, Red Tip	85-95	5'-7'	Smooth, cylindrical	8	7"-9"	4½"-5½"	White
King Phillip	Red	85-90	5'-7'	Smooth, cylindrical	8	6"-8"	4"-5"	White
Gehu	Yellow	80-90	5'-6'	Smooth, tapering	12-14	5"-7"	4½"-5½"	White
N. D. White	White	75-85	4'-5'	Smooth, tapering	8	5"-7"	4"-5"	White
Mixed Squaw Flint	Red, Blue, Yellow, White, Mixed	70-80	4'-5'	Smooth, tapering	8-12	5"-7"	4"-5"	White

Varieties of Sterling Seed Corn

THERE are twenty varieties of Sterling Seed Corn, ranging in maturity from Squaw Flint, which matures far north in Canada, to Silver King, adapted to Southern Minnesota and like sections. The map and chart on pages 18 and 19 can be used to determine the varieties adapted to any particular section. The map shows the Northwestern States divided into three zones according to the number of days of safe corn growing seasons. The third column on the chart shows the number of days required on the average to mature each variety.

Determine from the map in which growing season zone you are located. The varieties which should mature in your zone can be found by consulting the third column of the chart. Areas near the Great Lakes are exceptions on account of cool summer weather. Varieties about 10 days earlier than indicated by the map should be used there. These figures apply to Sterling varieties only, which are kept true to the types specified by the various State Experiment Stations.

Variety Names are Abused

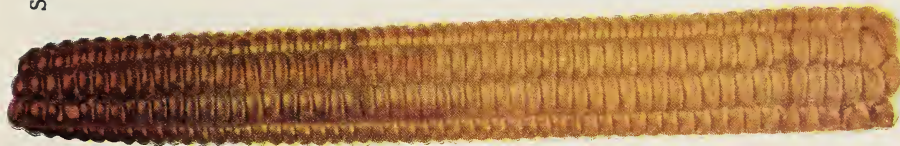
For instance, Minnesota No. 13, coming from Southern Minnesota or Nebraska, is very different in maturity from Sterling Minnesota No. 13, which is the standard Central Minnesota strain—conforming to the standards set by the Minnesota Experimental Station. Yet these late maturing strains are sold in competition with Sterling Minnesota No. 13, and so labeled as to lead the buyer to believe they are the same in maturity.

Always demand Sterling varieties which are true to type and uniform year after year.

Areas Where Sterling Varieties are Adapted:

Growing Season Areas	Varieties adapted:
Less than 90 days	<p>FOR GRAIN—N. W. Dent, Extra Early Minnesota No. 13, Minnesota No. 23, Mercer, Triumph, Smut Nose, King Phillip, Gehu, N. D. White, and Squaw Flint.</p> <p>FOR FODDER Minnesota No. 13, Rustler, Wisconsin AND ENSILAGE—sin No. 8, Longfellow Flint.</p>
90 to 100 days	<p>FOR GRAIN—Minnesota No. 13, Rustler, Wisconsin No. 8, Longfellow Flint.</p> <p>FOR FODDER Minnesota Ideal, Murdock, Wisconsin AND ENSILAGE—sin No. 12, Wisconsin No. 7.</p>
100 to 110 days	<p>FOR GRAIN—Minnesota Ideal, Murdock, Wisconsin No. 12, Wisconsin No. 7, Minnesota No. 13, Rustler, Wisconsin No. 8.</p>
For very short season areas	<p>FOR GRAIN—N. D. White Flint, Gehu Flint, Extra Early N. W. Dent, Squaw Flint.</p> <p>FOR FODDER N. W. Dent, Mercer Flint, Minnesota AND ENSILAGE—esota No. 13.</p>

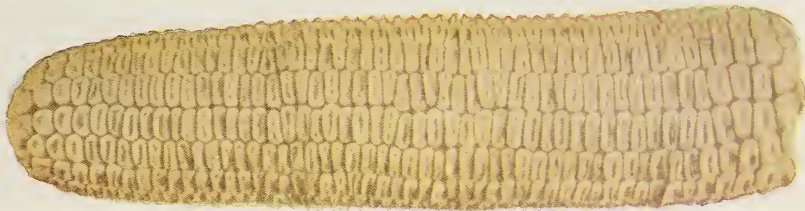
Smut Nose Flint



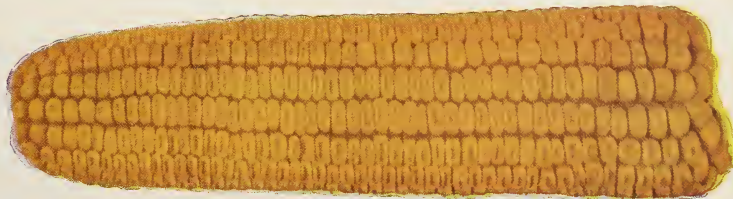
Golden Glow
Wisconsin No. 12



Silver King
Wisconsin No. 7



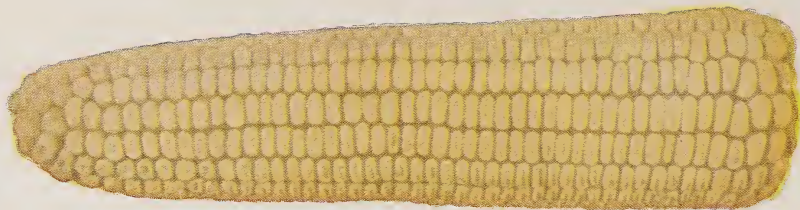
Early Yellow Dent
Wisconsin No. 8



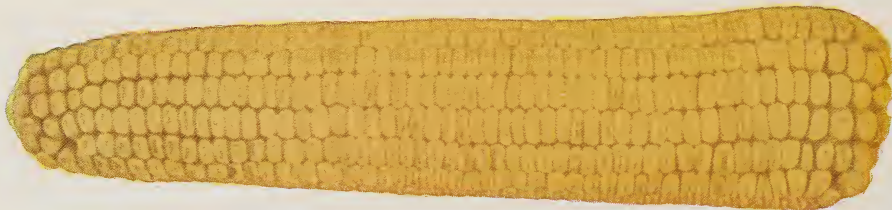
Wisconsin No. 25



Rustler White Dent



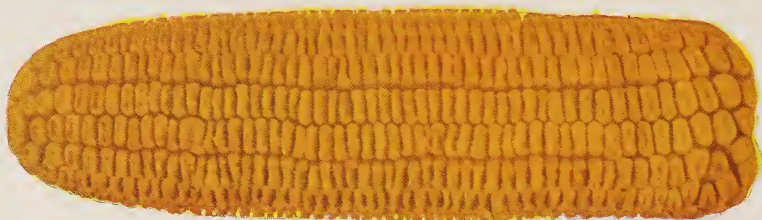
Minnesota Ideal



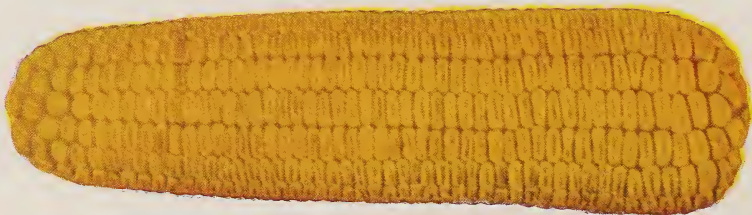
Longfellow Flint



Murdock



Minnesota No. 13
(Standard)

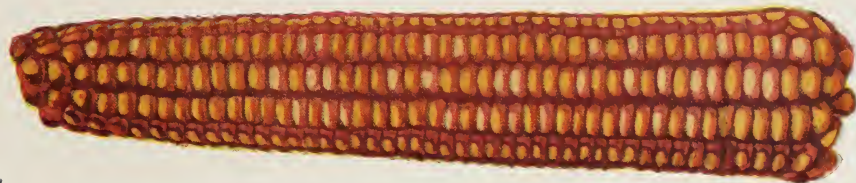


Northwestern Dent
(Standard)

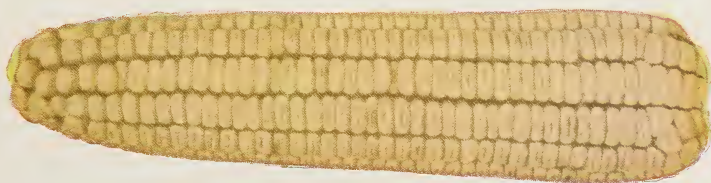
Extra Early
Northwestern Dent



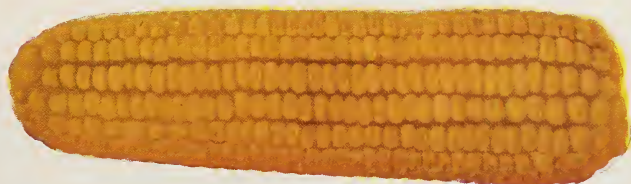
Triumph Flint



Minnesota No. 23
(White Cap Yellow Dent)



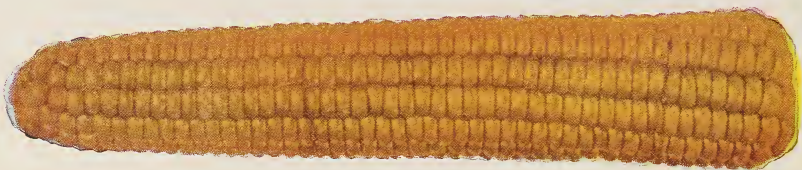
Extra Early
Minnesota No. 13



King Philip Flint



Mercer Flint



Gehu Flint



North Dakota White Flint



Squaw Flint



Standard Northwestern Dent

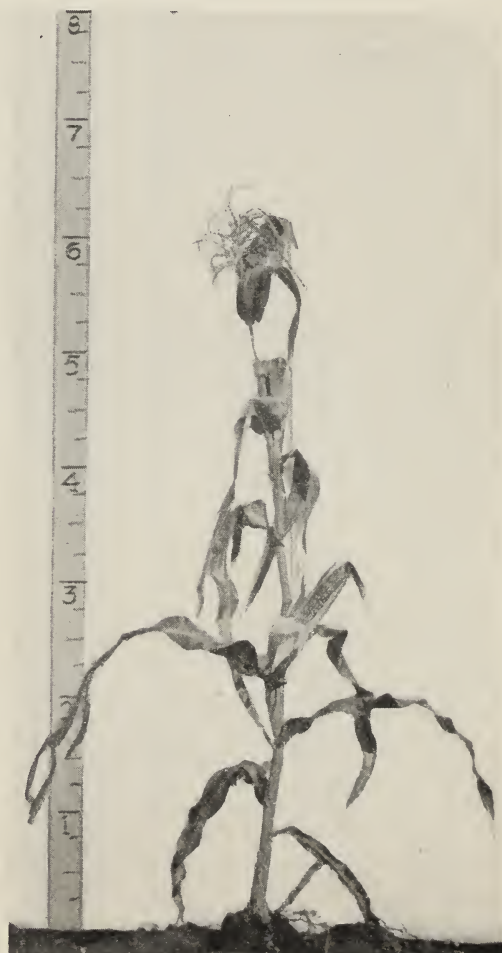
Red Semi-dent

ITS origin is not definitely known but it is supposed to be a cross between a red flint and a yellow dent. For this reason it is classed as a semi-dent.

It matures in 85 to 95 days, grows from 5 to 7 ft. high. Kernels are shallow and red with a copper yellow cap. Cob is white. The ear has from 10 to 14 rows and is 7 to 9½ in. long, 5 to 6 in. in circumference with a decided tendency to be tapering.

Northwestern Dent is very leafy with a thin stalk and usually has suckers, probably a characteristic inherited from its flint parent. These plant characteristics, coupled with its early maturity, have made it the most popular variety for growing in extreme northern sections for bundle feeding. Northwestern is not well adapted for husking since the cob is large and kernels shallow. It is especially well adapted for fodder and bundle feeding throughout northern Wisconsin, Minnesota, North Dakota, and Montana, and will make more growth in cool weather than the dents.

Northwestern requires more fertile soil to give good yields of grain than do Minnesota No. 13 or Rustler.



Extra Early Northwestern Dent

(Crookston Strain)

Red Semi-dent

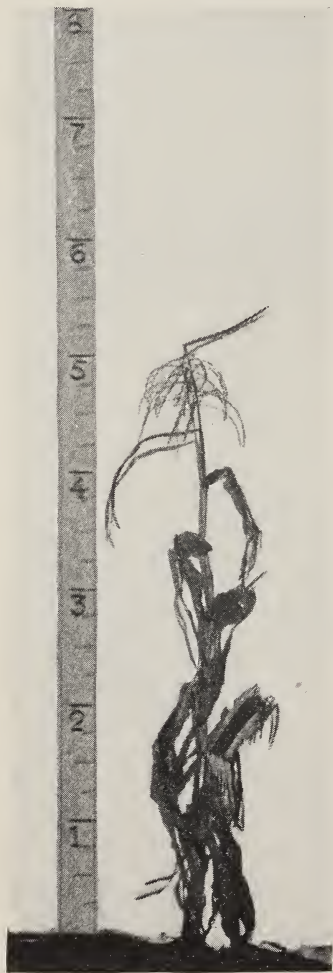
EXTRA Early Northwestern Dent is an early selection from the standard strain of Northwestern Dent made by the Crookston Experiment Station. It is from a week to ten days earlier than the Standard Central Minnesota strain, and matures quite consistently through extreme Northern Minnesota, North Dakota, and the higher elevations of Montana. It is especially adapted to the prairie provinces of Canada.

To get this earliness, size of plant and ears were sacrificed slightly, although it grows larger than most of the other extra early strains of Northwestern Dent developed in the dryer sections of the west.

The plants grow from 5 to 7 feet high, with a tendency to sucker, and the corn matures in 80 to 90 days.

Ears are 12 to 14 rows, 5 to 7 inches long. It is adapted for husking along both sides of the Canadian border and in high altitudes of mountainous country and for bundle feeding in the northernmost sections where corn is grown.

Our seed of this variety is grown from stock obtained each year from the Crookston Station thereby maintaining the original early maturity of the strain.



Standard Minnesota No. 13 Yellow Dent

Introduced by the Minnesota Experiment Station in 1897

MINNESOTA No. 13 is thought to be a smooth type selection from the old Pride of the North, the most popular yellow dent in Minnesota before 1897.

The original stock was obtained by the Experiment Station from a St. Paul seed company in 1893 and was given considerable breeding between that year and when it was introduced.

Minnesota No. 13 matures in 90 to 100 days, grows 6 to 8 feet high. Kernels are fairly dark yellow, of medium depth. Cob is red.

The ears carry from 14 to 16 rows of kernels and average 7 to 9 inches long, 6 to 7 inches in circumference. While the roughness of the ears varies, the fairly smooth type is considered the most desirable.

Minnesota No. 13 is the most popular yellow dent in Minnesota and is also favored in the northern half of Wisconsin, parts of North Dakota and Montana.

The standard strain is especially adapted for the growing season of Central Minnesota, but is used extensively as a husking crop over a large part of the northwest.



Extra Early Minnesota No. 13

(Haney Strain)

Introduced by Northrup, King & Co. in 1921

THIS early strain of Minnesota No. 13 was developed by careful selection for early maturity over a period of 25 years by a Mr. Thorp of Trail Co., N. D., and the International Harvester Co. on their experimental farm at Grand Forks, N. D.

It meets the demand for a yellow dent in sections farther north where the standard Minnesota No. 13 is too late in maturity, and where Northwestern Dent and Minnesota No. 23 only were available before.

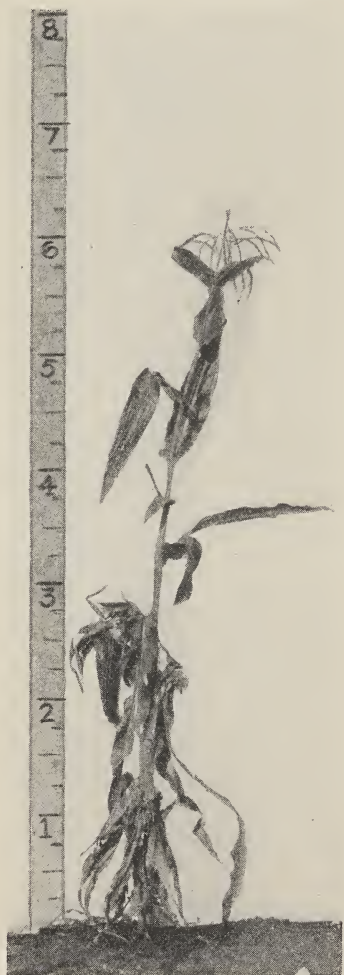
It matures in 85 to 95 days and grows 5 to 7 feet high. Ears are 5 to 7 inches long, and 5 to 7 inches in circumference. Kernels are yellow and cob red, with 12 to 16 rows.

Our crops of this Haney strain are grown from seed coming directly each year from Mr. Haney of the I. H. C. experimental farm at Grand Forks, N. D.

Extra Early Minnesota No. 13 is adapted for husking north of the 90 day line in Minnesota, North Dakota and Montana. It is quite similar to Wisconsin No. 25.

Extra Early Minnesota No. 13 has given the best yields of any of the Yellow dents at the North Dakota Experiment Station and is being recommended by Dr. Walster, Agronomist.

In yield tests at the Crookston substation, this strain gave excellent results.



Rustler White Dent

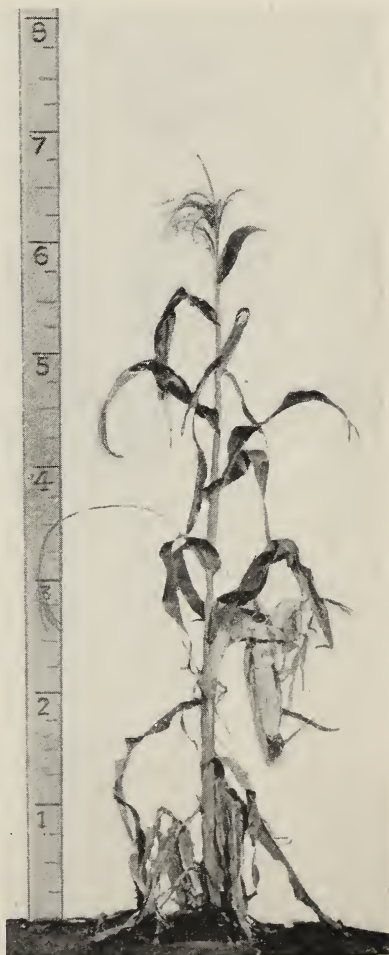
Introduced by Northrup, King & Co. in 1888

THE original stock of Rustler consisted of a few kernels of white corn, sent Mr. Northrup by a Dakota farmer in the early eighties. It proved to be an early maturing corn of good quality and was outstanding in its ability to produce good crops on poor soil. For this reason Mr. Northrup named it Rustler. It has proven itself the largest yielder of the standard central Minnesota varieties. While Minnesota No. 13 will yield about as much on very rich soil, Rustler will yield considerable more on soils not so rich.

Rustler matures in 90 to 100 days, grows 6 to 8 feet tall. Kernels are pure white, of medium depth; cob is white.

The ears are 8 to 9 inches long, $5\frac{1}{2}$ to $6\frac{1}{2}$ inches in circumference, with 14 to 16 rows of fairly smooth kernels. Silver King, the only other standard white variety in the northwest, is rougher, with deeper kernels and ears are not tapering like Rustler.

Rustler is adapted to Central Minnesota and like sections for husking and farther north for ensilage and fodder. Farther south Silver King is more commonly grown. The development and introduction of Rustler White Dent by Northrup, King & Co., more than ten years before Minnesota No. 13 was introduced, was a large factor in moving the corn belt farther north in Minnesota.



Early Murdock or Wisconsin No. 13

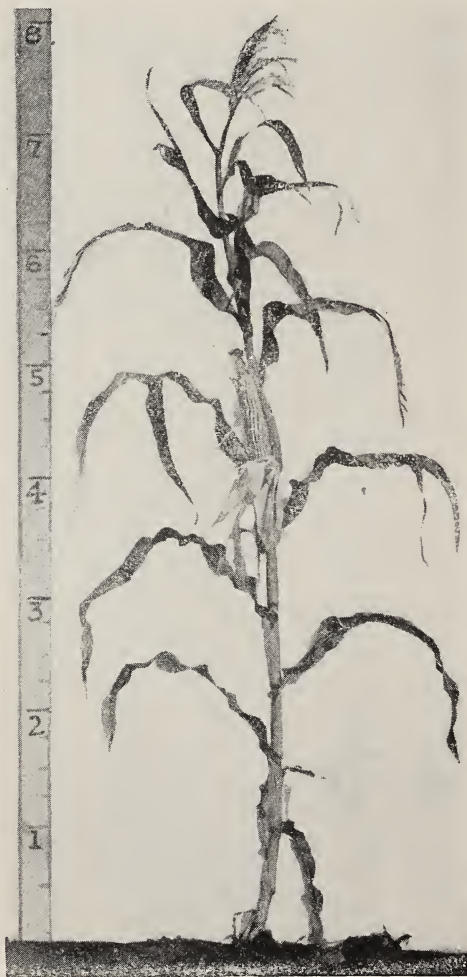
(Sometimes Called Golden Jewel)

MURDOCK has been a standard variety in Iowa, Wisconsin and southern Minnesota for years.

One outstanding feature is its deep kernel for an early corn. When shelled, it looks as though it might have been grown in Missouri.

Murdock matures in 100 to 110 days and grows 7 to 9 feet high. Ears are very rough, fairly short, 6 to 8 inches, but thick cylindrical, with 16 to 20 rows. Kernels are very deep and light yellow. Cob is very small and red.

It is adapted for husking and is rapidly becoming the most popular variety in southern Minnesota and sections with over 100 day seasons where Minnesota No. 13 is considered too early. On account of its deep kernels and small cob it shells out heavily. It is one of the later, larger varieties of southern Minnesota and Wisconsin and is also being used more in northern Iowa. Aside from color it is very similar to Silver King in ear and plant type.



Minnesota Ideal

Yellow Dent

Introduced by Northrup, King & Co. in 1905

MINNESOTA Ideal was grown as an unnamed variety in south central Minnesota a number of years before 1905 and is claimed to be a large Iowa variety gradually moved north.

It is a large, long eared variety with a tall stalk which yields heavily under especially favorable conditions, but is apt to produce too many nubbins if the soil is not extremely fertile.

Ideal matures in 100 to 110 days, grows 7 to 9 feet high. The ears are 8 to 9 inches long, with some considerably longer, circumference, 6 to 7 inches. The ears have 14 to 16 rows of kernels, rather shallow and smooth, with a fairly light yellow color. Cobs are fairly thick.

This variety at one time won a prize, offered by the late J. J. Hill, for the longest ear of corn.

Ideal is adapted, for husking, to the heavier soils of southern Minnesota and other sections having over 100 day growing seasons.

It is admirably adapted for ensilage and fodder farther north, having a much larger plant than Minnesota No. 13, only 10 days later in maturity.



Minnesota No. 23

White Cap Yellow Semi-Dent

Introduced in 1908 by the Minnesota Experiment Station

THERE are many local strains of White Cap Yellow Dent mostly of late maturity. Minnesota No. 23 came from Polk County originally, and is earlier and smaller than most of these strains.

Its main recommendations are its earliness and very uniform ears with high shelling percentage. It matures in 85 to 95 days and grows 5 to 7 feet tall. Ears are tapering and 5 to 6 inches long with 10 to 14 rows, and a circumference of 5 to 6 inches.

Kernels are fairly shallow with yellow sides and a white cap. Cobs are small and red.

Minnesota No. 23 is quite popular in parts of Northern Minnesota and North Dakota as a husking crop. For many years it was the only variety of dent earlier than Minnesota No. 13.

It yields well in grain, but is not recommended for fodder or ensilage.

On sandy soils its early maturity places it out of danger before the dry part of the summer and often gives a larger yield than later varieties.



Wisconsin No. 12-Golden Glow

Yellow Dent

Originated by the Wisconsin Experiment Station

GOLDEN Glow was originated by the Wisconsin Experiment Station by crossing Wisconsin No. 8 and the Tools North Star. It has become one of the most popular varieties in Wisconsin and several other states, especially to the east. It is later and larger than Wisconsin No. 8 and Minnesota No. 13, yields very well, with handsome ears.

It matures in 100 to 110 days and grows 8 to 10 feet high. The ears are 6 to 9 inches long, with soft golden yellow kernels, 16 to 18 rows to the cob. Cobs are cherry red. Ears are distinctively tapering, with kernels of moderate depth and width.

It is adapted for husking through southern Wisconsin and Minnesota as far north as the 100 day line. North of this it is one of the best varieties for ensilage and fodder because of the large plant, with an abundance of leaves.

Compared with Silver King it is a trifle earlier, grows about the same size and is preferred on account of its yellow grain.



Silver King, Wisconsin No. 7

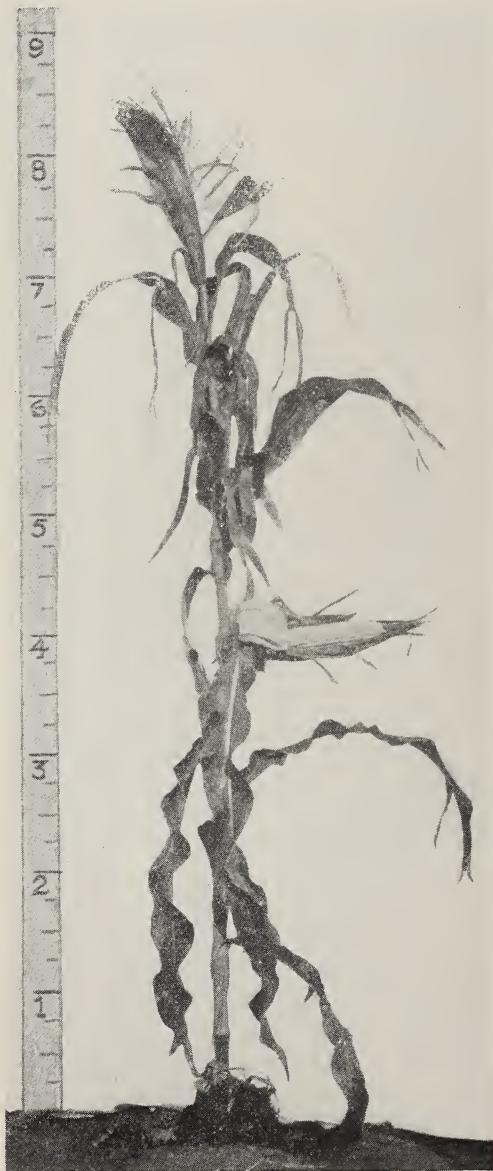
White Dent

Originated by H. J. Goddard, Ft. Atkinson, Iowa

SILVER King is one of the oldest varieties we have and like its white sister Rustler, is the best yielder in sections where it is adapted. Its outstanding features are its ability to yield well and the very typey ears it produces.

It matures in 100 to 110 days and grows 7 to 9 feet high. Ears are 7 to 8 inches long, very cylindrical, with 16 to 20 rows, with a circumference of 7 to 8 inches. Kernels are quite deep. Cob small and white. The uniform shapely ears make Silver King a favorite at corn shows.

Silver King has consistently won first place in an extensive yield contest held in northern Iowa and is rapidly becoming very popular through southern Minnesota and Wisconsin. It can be safely grown for grain up to the 100 day growing season line, but Rustler should be used north of this line. For ensilage and fodder it is a heavy yielder and quite desirable for this purpose in the 90 to 100 day section.



Wisconsin No. 8

Early Yellow Dent

Introduced by the Wisconsin Experiment Station

WISCONSIN No. 8 was developed by straight selective breeding from the Minnesota No. 13 variety by the Wisconsin Experiment Station.

It matures in 90 to 100 days and grows 6 to 8 feet tall. Ears are 6 to 8 inches long and 7 to 9 inches in circumference, fairly smooth dent and slightly tapering with 14 to 16 rows. Cob is red. Kernels are medium deep with a tendency towards dark sides.

Wisconsin No. 8 is especially adapted for husking through Central Wisconsin between the 90 and 100 day lines, also north of this for ensilage and fodder.

Wisconsin No. 8 gives way to the more popular variety of Golden Glow where the seasons are long enough to mature this later variety.



Wisconsin No. 25

Yellow Dent

Introduced by the Wisconsin Experiment Station

WISCONSIN No. 25 is an extra early yellow dent developed by the Wisconsin Experiment Station at one of its northern sub-stations.

It is very similar to Extra Early Minnesota No. 13 in maturity and plant characteristics but the ears of No. 25 have fewer rows and the kernels are broader.

It is very popular even though introduced only recently.

Wisconsin No. 25 matures in 85 to 95 days and grows 5 to 7 feet tall. Ears are 5 to 7 inches long and tapering, with 12 to 14 rows. Kernels are not deep, and while yellow have a tendency to be red on the sides.

It is adapted for husking throughout northern Wisconsin where the seasons are less than 90 days. It is one of the best contributions of the Wisconsin Experiment Station to the list of corn varieties and fills a decided need.



Longfellow Flint

Yellow

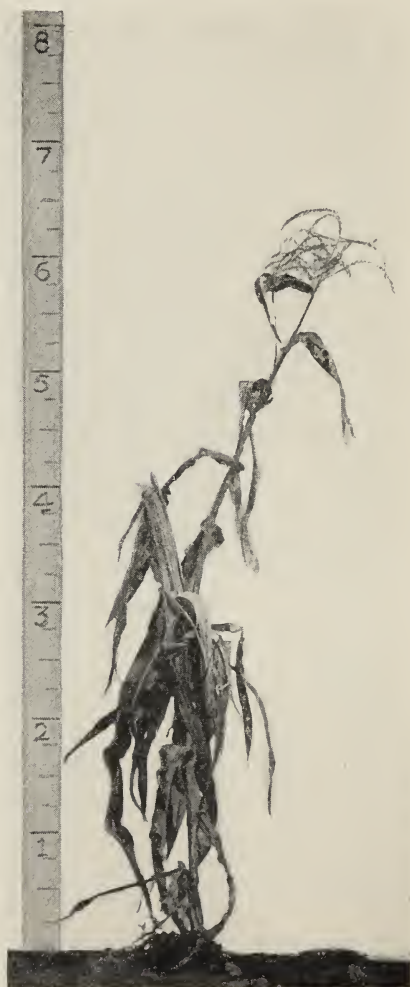
LONGFELLOW is one of the later flints maturing in about the same time as Minnesota No. 13. It was originated by a descendant of the Poet and introduced in 1878 by a New England seed company.

The Sterling Strain of Longfellow has especially handsome smooth ears. For two years this strain grown in Minnesota has taken the highest flint corn prize awarded ten ears at the International Show at Chicago.

Longfellow matures in 90 to 100 days and grows 6 to 8 feet high. The ears are long, slim and smooth, with 8 rows of rather broad kernels neatly arranged on a cylindrical, slender white cob. Most flints have thick shanks attaching the ear to the stalk, but Longfellow shanks are as small as any of the dents.

Longfellow is adapted for late planting when fodder of fine quality is desired between the 110 day and the 90 day lines. It is not much used as a husking crop, although in a 5 year variety test at the Minnesota Experiment Station it yielded 36.9 bushels per acre compared with 35.4 bushels for Minnesota No. 13.

The slim ears are difficult to husk without breaking and the hard flint kernels are not considered as desirable for feed as the dents. The fodder of these later flints, however, is largely leaves, with very thin stalks, and make excellent feed as dry fodder.



Triumph Flint

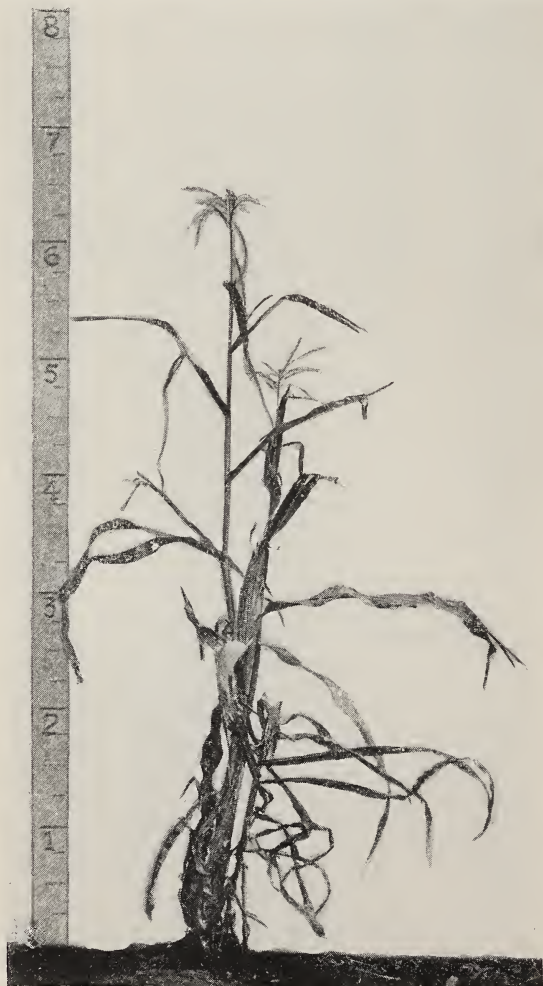
Yellow

Introduced by Northrup, King & Co. in 1899

ITS outstanding character is its large ears with 12 to 14 rows where most flints have a slim ear with 8 rows.

Triumph is very similar to Mercer Flint, only larger. It grows from 5 to 7 feet tall and matures in 85 to 95 days.

Ears are 5 to 7 inches long and 5 to 6 inches in circumference with 12 to 14 rows of small yellow kernels with a decidedly tapering shape.



Triumph Flint is very popular for sheep pasture in Montana and North Dakota. It rarely fails to mature over the plain areas of these states and provides a large quantity of grain with a very leafy fodder.

The desirable characteristic of all flint varieties is their tendency to ripen early, which makes them popular for late planting. The stalks of the flints are of smaller diameter with a larger proportion of fine leaves than the dents. For this reason stock will often eat flint corn fodder up clean while coarse stalks of dents are left on the ground being too coarse to eat.

Mercer Flint

Yellow

Introduced by Northrup, King & Co. in 1888

MERCER Flint is a selection from the old Rideout variety, and is probably the most popular medium early flint in the northwest.

It is slightly earlier and smaller than Triumph, but yields well. It grows up to a better height to handle with a corn binder, which makes it more desirable than the real dwarf squaw flints. The plants grow $4\frac{1}{2}$ to $6\frac{1}{2}$ feet high and mature in 80 to 90 days.

Ears grow well up from the ground and are 5 to 6 inches long, with 10 to 14 rows of small yellow grain. The ear shape is decidedly tapering.

Mercer is adapted to husking along the Canadian border in the area having less than 90 days growing season.

For hogging and sheeping down, or where the entire plant is fed to cattle, Mercer is a favorite.

It is the recommended medium early flint variety of the North Dakota Experiment Station.

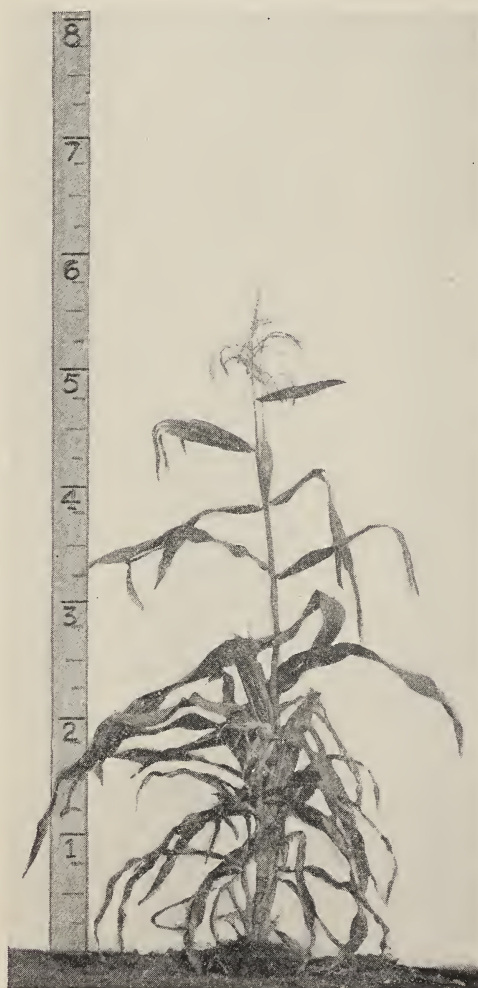


King Phillip Flint

Red

Introduced into the Northwest by Northrup, King & Co. in 1884

KING Phillip Flint is a very old New England variety named after the famous Indian Chief. Its dark red color suggests the color of the Indian's skin.



It grows from 5 to 7 feet high and matures from 85 to 95 days.

Ears have 8 rows, are dark red and slender, being 6 to 8 inches long.

King Phillip is very similar to Triumph and Smut Nose in plant characteristics and maturity and adapted to about the same uses.

In the New England states the name King Phillip is sometimes applied to a yellow flint, but in the Northwest the original red flint introduced by Northrup, King & Co. in 1884 is the only variety designated by that name.

Smut Nose Flint

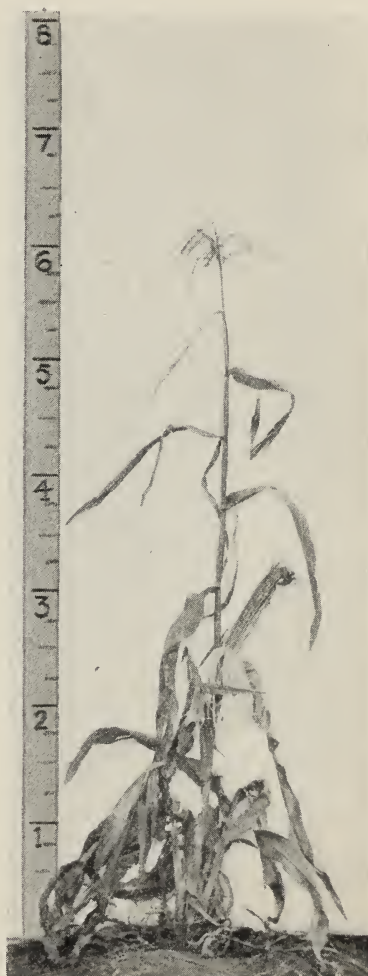
Yellow---Red Tip

SMUT Nose is an old New England variety of flint very popular in the New England States. It grows 5 to 7 feet high and matures in 85 to 95 days.

The ears are similar to Longfellow but of a rougher type having a thicker cob and are more tapering. The ears are 7 to 9 inches long, $4\frac{1}{2}$ to $5\frac{1}{2}$ inches in circumference.

Kernels are yellow; arranged in 8 rows with a blaze of red kernels towards the tip of the ear from which it derives its name, Smut Nose.

Smut Nose is a competitor with Mercer for popularity in sections north of the 90 day line. It is quite satisfactory as a husking corn—grows up to a good height yet matures surprisingly early for the size of the ear and plant. It is one of the best yielding flints and is used over a large area north and south for fine quality fodder and for grain. The ears being thicker makes its husking easier than Longfellow.



Gehu Flint

Yellow Dwarf

INTRODUCED in 1889 and supposed to be a cross between an 8 row yellow squaw flint and Mercer. It is slightly earlier than Mercer and quite dwarf, although this feature shows considerable variation.

Gehu grows 4 to 6 feet high and matures in 80 to 90 days.

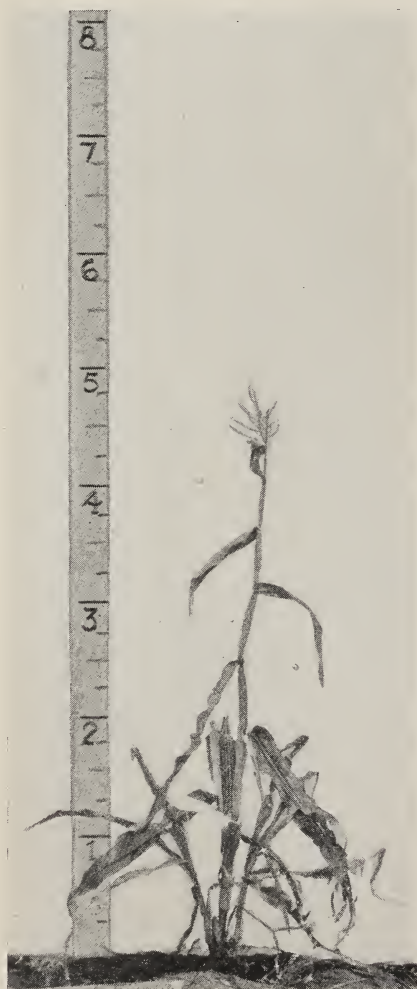
Ears have 10 to 14 rows, are 5 to 7 inches long and $4\frac{1}{2}$ to $5\frac{1}{2}$ inches in circumference, very tapering.

Kernels are lemon yellow color, while Triumph and Mercer kernels are more of an orange or dark yellow color.

Gehu is one of the so-called squaw flints of a pure color.

It is not generally used as a husking variety on account of the ears being so close to the ground, but this feature makes it a desirable variety for early hogging down. Gehu usually produces more than one ear to the stalk.

It is the earliest yellow variety, only slightly later than North Dakota White Flint.



North Dakota White Flint

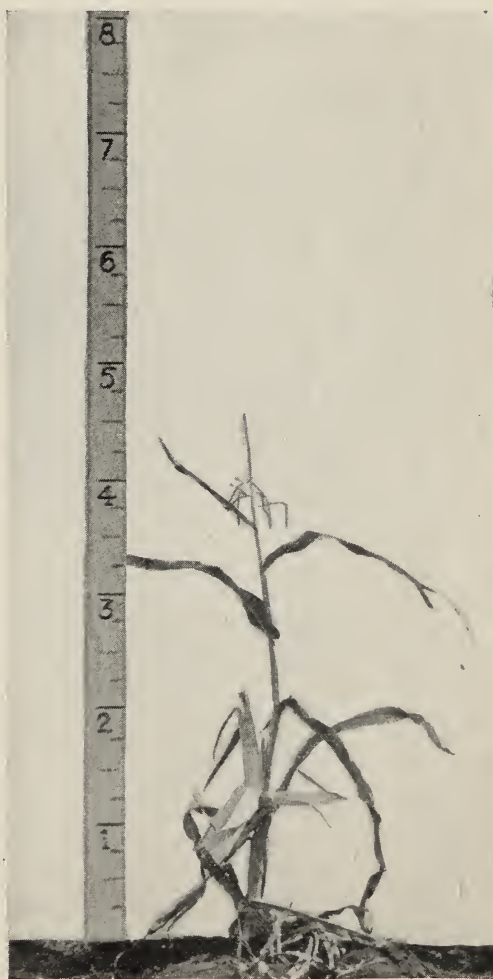
NORTH Dakota White Flint is one of the earliest standard varieties of flint corn, although there are a few varieties of flour corn somewhat earlier. It is supposed to be the same pure variety grown along the Missouri River in North Dakota by local Indian tribes when this country was first explored by white men.

It grows very dwarf, from 4 to 5 feet and matures in 75 to 85 days.

Ears grow very close to the ground, have 8 rows, being about 5 to 6 inches long, decidedly tapering.

It is adapted to early hogging down and is ripe enough to turn into by August 1st in central Minnesota. In the extreme north it is one of the few husking varieties which can be depended upon to ripen. In these sections it is often cut with a mower and threshed with a threshing machine, a mixture of cobs and shelled corn being delivered from the grain spout.

It is the most popular variety of the dwarf flint group through northern Minnesota, North Dakota and Montana.



Squaw Flint

Mixed

SUPPOSED to be a mixture of the various sorts once grown by North Dakota Indians as pure varieties.

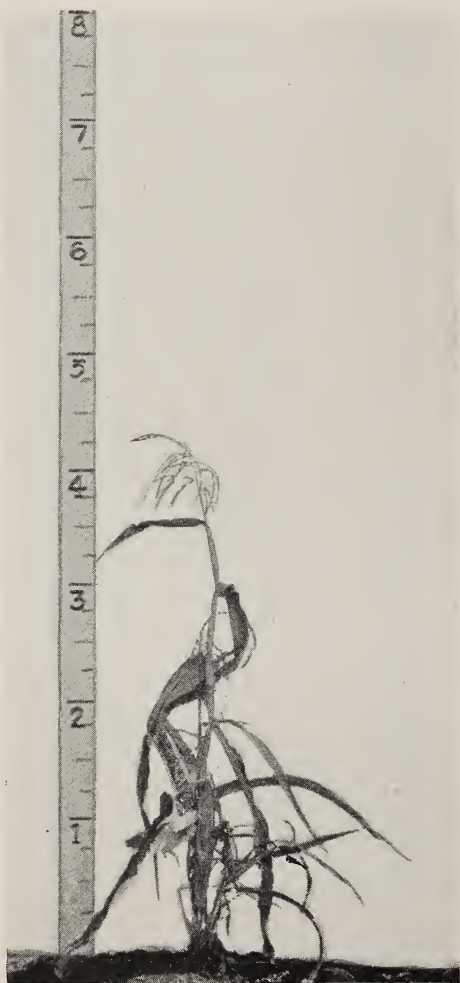
Kernels are a mixture of Red, Blue, White, and Yellow colors.

Plants grow 4 to 5 feet high and mature in 70 to 80 days.

Ears are 5 to 6 inches long, usually having 8 rows.

Mixed Squaw Flint is slightly earlier than North Dakota White, a trifle shorter, but a very vigorous variety.

It is adapted for hog or sheep pasture and yields much better than one would expect from a plant so short. In some sections where the growing season is very short, Mixed Squaw is the only variety which will make grain.

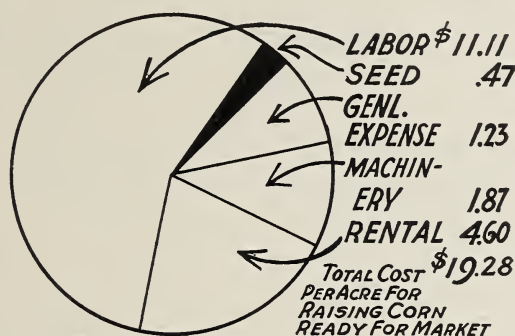


The Value of Sterling Seed Corn

S EED Corn should be valued on the basis of the crop it will produce rather than so much per bushel.

One bushel of seed corn, capable of producing a crop of 350 bushels is worth \$35.00 more than one producing only 270 bushels, with corn at 50c per bushel. These are the yields of 7 acres which one bushel of seed will plant with 50 and 40 bushel yields per acre.

It sometimes seems that \$1.00 per bushel is a large premium to pay for best seed corn, but when valued on the basis of yield it is evident the best seed is the cheapest in the end while cheap seed is expensive at any price.



According to figures obtained by the Minnesota Experimental Station, the cost of seed corn is only 1/40th of the cost of producing an acre of corn, or less than 50c per acre for seed corn costing \$3.00 per bushel. If one could buy seed corn as low as \$1.50 per bushel, the saving would be only 25c per acre. But who would add an unnecessary risk to an investment of \$20.00 to save 25c?

More and more farmers every year are finding it more profitable to buy Sterling Seed Corn rather than put up their own. The Wisconsin Experimental Station compared seed corn put up at home by 350 different farmers with fire dried seed corn and obtained the following data:

Method of Storage	Average Germination	Average Stand
1. Fire Dried	91.5%	89%
2. Furnace Dried	91.0%	...
3. Room above Kitchen	86.5%	81%
4. Attics	84.5%	79%
5. Under Porches	70.5%	63%
6. Granaries	54.0%	77%
7. Barns, Toolhouses	69.0%	60%
8. Corn Cribs	37.5%	49%
9. In Shock during Winter	41.2%	41%
10. Windmills, Walls of Buildings	34.0%	56%

Fire dried Seed Corn gave 8% better stand than the farmers' seed stored as farmers usually do over the kitchen. Few farmers have the necessary equipment, experience or the time to fire dry seed corn in the early fall.

One trial with Sterling Seed Corn is enough to convince most farmers it is more economical and profitable to plant.

Sterling Seed Corn for Silo Planting

NORTHERN Grown Seed Corn of early maturity is recommended by Experiment Stations and Agricultural Authorities for planting for the Silo in the Northwest. Southern Grown seed of late maturity deceives the planter by appearing to give a larger tonnage but the extra weight is only water. Early maturing corn gives nearly twice the amount of dry matter. The results of an experiment to determine this shows—

Yield of 10 Acres of Corn Grown for Silage

	Late Maturing Lbs. from 10-A	Early Maturing Lbs. from 10-A
Water	129,170	101,670
Dry Matter	48,100	75,600

More feed can be stored in the same silo when filled with Silage from early maturing corn which can be cut at the proper silage stage, than with late maturing corn which often must be cut in the milk stage. Experiments have shown the following:

Weight in Lbs. Per Acre

	Lbs. of Dry Matter	Percent Dry Matter
Corn cut at Milk Stage	4643	14%
Corn cut at Dent Stage	7560	25%

Considerably more feed (dry matter) can be stored in a silo with silage containing 25% dry matter compared with green silage having only 14% dry matter.

Less grain feed is required where early maturing corn cut at the proper stage with well developed ears is put into the silo.

Experiments showed that 1.6 lbs. more grain per head daily must be fed with green corn silage to produce the same results as silage made from early maturing corn, cut at the right stage. 65 lbs. more grain per day, or one ton more each month would have to be fed to a herd of 40 cows to produce the same results. Why feed a ton more grain each month? Save this money by planting the right corn for the Silo. Late maturing corn put in the silo too green often spoils and is seldom equal in quality to early corn.

Twice the quantity of Seed Corn should be planted for silage as for a husking crop. Experiments showed one bushel planted on 3 to 4 acres to give the highest yield of net energy.

For the Silo, plant the Sterling varieties recommended for husking either in your zone or the next zone south. Besides the husking varieties, Golden Glow, Minnesota Ideal, Murdock or Silver King have given good results in the 90 to 100 day zone. Flint varieties, like Longfellow, should be given serious consideration in the less than 90 day zone.

NORTHROP, KING & CO.'S STERLING SEED CORN

is sold only in stitched, seamless bags bearing the Sterling Trademark. Fire Dried in October or November to 12% moisture. Germination 90% or better. Costs only a few cents more per acre than ordinary seed corn.



**Sold Only By Local Dealers
Over The Northwest**

NORTHROP, KING & CO., *Seedsman*
Minneapolis, - - - Minn.